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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/846,451	04/30/2001	Ming Duong-van	3397P006	4450

8791 7590 04/06/2007

BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD
SEVENTH FLOOR
LOS ANGELES, CA 90025-1030

EXAMINER	
HOM, SHICK C	
ART UNIT	**PAPER NUMBER**
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/06/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/846,451	DUONG-VAN ET AL.	
	Examiner	Art Unit	
	Shick C. Hom	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/8/07 & 2/21/07*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2 and 5-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2 and 5-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/21/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 1/8/07 have been fully considered but they are not persuasive. While examiner agrees with applicant's argument, in page 5 lines 22-24, page 6 lines 22-25, and page 7 lines 12-14 of the remarks, that Rumsewicz does not teach or suggest determining at least one resonance point that exhibits improved network performance metrics at the control point by scanning across a range of bandwidths until one or more of the network performance metrics is/are optimized, as recited in amended claims 1, 6, and 9; however, applicant's argument is not persuasive because Loguinov et al. in the abstract recite determining a bottleneck bandwidth over a communication network including the steps of transmitting packet bursts; calculating a set of bandwidth samples for each burst received; and determining the bottleneck bandwidth from the calculated bandwidth samples for the following transmission of data packets between the server and the client clearly reads on determining the resonance point that exhibits improved network performance metrics by scanning across a range of bandwidths until one or more of the network performance metrics is/are optimized as in claims 1, 6, and 9. Clearly, the determined

bottleneck bandwidth for the following transmission between the server and the client corresponds to the resonance point whereby the network performance metrics, i.e. throughput or packet loss, is/are optimized.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35

U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-2 and 5-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rumsewicz (6,532,214) in view of Loguinov et al. (2002/0169880).

Regarding claims 1-2 and 5-14:

Rumsewicz discloses a method and apparatus, comprising: operating a control node of a communication network at a packet bandwidth wherein the control node is located in a communication link between at least one server and at least one client (see col. 1 line 54 to col. 2 line 3 which recite the node for controlling traffic in a system that provide services between customers and the service provider by monitoring average traffic profile passing through the node, detecting congestion, and invoking congestion controls clearly anticipate the control node) and wherein

the control node comprises at least one control point wherein at least one resonance of network performance metrics is determined at the control point by scanning across a range of bandwidths as in claims 1, 6, 9; and wherein the network performance metrics comprise one or more of throughput, average

fetch time and packet loss as in claims 2, 7 (see Fig. 1 the control point 13; col. 1 lines 50-53 which recite the control point maintaining targeted level throughput; col. 14 lines 19-22 and 32-35 which recite the control point sending a congestion control signal to the control node when an overload of traffic is detected at the control point; and col. 4 lines 32-40 and col. 10 lines 30-32 which recite the performance measures of interest being response time, waiting time, delay, throughput, and processor utilization).

Rumsewicz discloses all the subject matter of the claimed invention with the exception of wherein at the least one resonance point that exhibits improved network performance metrics determined at the control point by scanning across the range of bandwidths until one or more of the network performance metrics is/are optimized, and wherein said packet bandwidth corresponds to a best observed resonance point from the at least one resonance point as in claims 1, 6, 9, and 12-13; wherein the packet bandwidth is set by varying an inter-packet delay time over selected communication links at the control node as in claims 5, 8, and wherein the control point comprises means to determine at least one resonance point of network performance metrics by scanning across a range of bandwidths until one or

more of the network performance metrics is/are optimized as in claims 10-11, 14.

Loguinov et al. from the same or similar fields of endeavor teach that it is known to provide wherein at the least one resonance of network performance metrics determined at the control point by scanning across the range of bandwidths until one or more of the network performance metrics is/are optimized, and wherein said packet bandwidth corresponds to a best observed resonance point from the at least one resonance point as in claims 1, 6, and 12-13 (see paragraph 0033 and claim 1 which recite mechanism being used to achieve performance improvements including the step of determining the best bandwidth for the transmission of data packets from the server to the client clearly anticipate optimizing the network performance metrics as claimed); wherein the packet bandwidth is set by varying an inter-packet delay time over selected communication links at the control node as in claims 5, 8 (see the abstract and paragraphs 0008, 0011, and 0030 which recite generating and using different inter-packet spacing for determining the bandwidth); and wherein the control point comprises means to determine at least one resonance point of network performance metrics by scanning across a range of bandwidths until one or more of the network performance metrics is/are optimized as in claims 10-11, 14 (see

the abstract and paragraph 0010 which recite the method and device for estimating bottleneck bandwidth over a communication network including the step of calculating a set of bandwidth samples between the server, through the bottleneck link, and the client and determining a new bandwidth from the calculated bandwidth samples for the following transmission of data packets between the server and the client; and paragraph 0032 which recite the estimates being used for congestion control between the server system and the client system. Further, see paragraph 0033 and claim 1 which recite mechanism being used to achieve performance improvements and the step of determining the best bandwidth for the following transmission of data packets from the server to the client clearly anticipate optimizing the network performance metrics as claimed) as in claims 10-11, 14.

Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide wherein the packet bandwidth is set by varying an inter-packet delay time over selected communication links at the control node, and wherein the control point comprises means to determine at least one resonance point of network performance metrics by scanning across a range of bandwidths until one or more of the network performance metrics is/are optimized as

taught by Loguinov et al. in the communications method and apparatus of Rumsewicz.

The packet bandwidth being set by varying an inter-packet delay time over selected communication links at the control node and wherein the control point comprises means to determine at least one resonance point of network performance metrics by scanning across a range of bandwidths until one or more of the network performance metrics is/are optimized can be implemented by providing the step of setting the packet bandwidth by varying an inter-packet delay time over selected communication links at the control node and providing the control point means to determine at least one resonance point of network performance metrics by scanning across a range of bandwidths until one or more of the network performance metrics is/are optimized of Loguinov et al. to the control node and control point of Rumsewicz. The motivation for using the step of setting the packet bandwidth by varying an inter-packet delay time over selected communication links at the control node and the control point means for determining at least one resonance point of network performance metrics by scanning across a range of bandwidths until one or more of the network performance metrics is/are optimized as taught by Loguinov et al. in the communication method and apparatus of Rumsewicz being that it

provides more efficiency for the system since the system can better optimize network performance in the communication network.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C. Hom whose telephone number is 571-272-3173. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SH SH

Seema S. Rao 4/2/07
SEEMA S. RAO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600